



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,686	11/20/2003	Brian W. Hedrick	106010-1	9328

23490 7590 03/30/2005

JOHN G TOLOMEI, PATENT DEPARTMENT  
UOP LLC  
25 EAST ALGONQUIN ROAD  
P O BOX 5017  
DES PLAINES, IL 60017-5017

EXAMINER

LEUNG, JENNIFER A

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/717,686

Applicant(s)

HEDRICK ET AL.

Examiner

Jennifer A. Leung

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-20-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

re

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

On page 1, line 5, -- now U.S. Patent No. 6,780,308, -- should be inserted after "November 21, 2001," to update the application priority. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear as to the structural limitation applicant is attempting to recite by, "said top section and said bottom section being demarcated by an imaginary line extending laterally on said baffle and substantially parallel to one of said top edge, said bottom edge, and an imaginary line bifurcating said baffle into equal areas," in lines 11-14, as it is unclear as to the relationship between "an imaginary line" of line 12 and "an imaginary line" of line 14. Furthermore, it is unclear as to the structural limitation applicant is attempting to recite in lines 15-18, because it is unclear as to the relationship of "said baffle" or "the baffle" (i.e., singular form) to the "plurality of sloped stripping baffles" in line 8 (i.e., plural form). Furthermore, it is unclear as to the relationship of "the section" in line 17 to "a top section" and "a bottom section" set forth in lines 9-11.

Art Unit: 1764

Regarding claim 2, “stripping gas” in lines 2-3 lacks proper positive antecedent basis, since only “stripping fluid” is set forth in claim 1.

Regarding claim 4, it is unclear as to the relationship of “said baffle” (i.e., singular form) to “a plurality of sloped stripping baffles” set forth in claim 1, line 8 (i.e., plural form).

Regarding claim 5, it is unclear as to the relationship of “the baffle” (i.e., singular form) to “a plurality of sloped stripping baffles” set forth in claim 1, line 8 (i.e., plural form).

Regarding claim 6, it is unclear as to the relationship of “said baffle” (i.e., singular form) to “a plurality of sloped stripping baffles” set forth in claim 1, line 8 (i.e., plural form).

Regarding claim 8, it is unclear as to the structural limitation applicant is attempting to recite by, “the imaginary line bifurcates said baffle into equal area”, as it is unclear as to the relationship between the imaginary line in claim 8 and the two imaginary lines set forth in claim 1, lines 12 and 14, and it is unclear as to how the limitation differs from the structural limitation already set forth in claim 1, lines 13-14. Furthermore, it is unclear as to the relationship of “said baffle” (i.e., singular form) to “a plurality of sloped stripping baffles” set forth in claim 1, line 8 (i.e., plural form).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hedrick (US 6,740,227).

The applied reference has a common inventor and is commonly assigned with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 2, 4 and 8, Hedrick (FIG. 6-8; column 12, line 61 to column 13, line 43) discloses an apparatus comprising:

a stripping vessel (i.e., defining stripping zone **132**);

at least one port defined by the stripping vessel **132**, wherein said at least one port comprises a single opening at the top of the stripping vessel (see FIG. 6);

a plurality of sloped stripping baffles (i.e., outer baffles **135** and inner baffles **137**) spaced apart vertically over at least a portion of the stripping vessel height with each baffle having a sloped surface, each baffle having a top section proximate a top edge of said baffle and a bottom section proximate a bottom edge of said baffle, wherein the top and bottom sections are defined by an imaginary line set to bifurcate said baffles **135**, **137** into equal areas (imaginary line not labeled; see FIG. 7, 8);

a plurality of openings on the top section of said baffle (i.e., the upper rows of openings **140** in baffle **135**, and the upper rows of openings **141** in baffle **137**; FIG. 7, 8) and a plurality of openings on the bottom section of said baffle (i.e., the lower rows of openings **140** in baffle **135**, and the lower rows of openings **141** in baffle **137**; FIG. 7, 8), a ratio of the total area of openings

Art Unit: 1764

to the area of the section of the baffle being greater in the bottom section of said baffle than in the top section of said baffle, and a total area of openings in the bottom section being greater than in the top section of said baffle (i.e., "Each baffle contains over 600 holes but the hole distribution biases the distribution of holes toward the lower end of the sloped baffle surface," column 13, lines 29-32; reference claim 25);

at least one fluid inlet (i.e., inlets 133; FIG. 6) for passing a stripping fluid to the underside of at least one stripping baffle; and

at least one particle outlet (i.e., reactor conduit 136; FIG. 6) for recovering stripped particles from the stripping baffles.

Regarding claim 3, Hedrick discloses each stripping baffle 135, 137 (FIG. 6-8) has a transverse projection equal to at least one-third of the minimum transverse cross-section of the stripping vessel at that baffle location (see FIG. 3, 6; column 11, lines 17-33; claim 19).

Regarding claim 5, Hedrick discloses an average distance between adjacent openings 140 in baffle 135 or openings 141 in baffle 137 is smaller in the bottom section of the baffle than in the top section of the baffle (see FIG. 7, 8; column 13, lines 29-32).

Regarding claim 6, Hedrick discloses the openings 140 in baffle 135 or openings 141 in baffle 137 in the bottom section and top section of said baffle are distributed in rows substantially parallel to one of said top and bottom edges (see FIG. 7, 8; column 13, lines 29-32).

Regarding claim 7, Hedrick discloses a distance between adjacent rows of openings 140 or 141 and a distance between openings 140 or 141 in one of said adjacent rows of openings is equal (see FIG. 7, 8; column 13, lines 29-32).

Instant claims 1-8 structurally read on the apparatus of Hedrick.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostergaard (US 2,519,150).

Regarding claims 1, 2, 4 and 8, Ostergaard (FIG. 1; column 5, line 16 to column 7, line 35) discloses an apparatus comprising:

a stripping vessel (i.e., stripper shell **2**);

at least one port defined by the stripping vessel **2**, wherein said port comprises a single opening at the top of the stripping vessel **2** (see FIG. 1)

a plurality of sloped stripping baffles (i.e., funnel shaped baffles **8**, **9**; conical baffle **13**) spaced apart vertically over at least a portion of the stripping vessel height, with each baffle having a sloped surface;

a plurality of openings (i.e., perforations **15**, **16**, **17**) located on an "upper part" of each

Art Unit: 1764

baffle 8, 9, 13 (column 5, lines 42-47);

at least one fluid inlet for passing a stripping fluid to the underside of at least one baffle (i.e., stripping fluid inlet 18); and

at least one particle outlet (i.e., standpipe 4) for recovering stripped particles from the stripping baffles.

In comparing baffles 8, 9 and 13 of Ostergaard (FIG. 1) to the baffles disclosed by Applicant (FIG. 2 of the disclosure), the “upper part” of each of the funnel shaped baffles 8 and 9 corresponds to Applicant’s outer baffle 35, and the “upper part” of conical baffle 13 corresponds to Applicant’s inner baffle 37. Hence, the “lower part” of each of the baffles 8, 9 and 13 corresponds to Applicant’s vertical skirts 50 and 52 for baffles 35 and 37, respectively.

An “imaginary line” that extends laterally on each baffle to divide each baffle into a top section, proximate a top edge of the baffles, and a bottom section, proximate a bottom edge of the baffles, would thus bifurcate the perforated “upper part” of each of the baffles 8, 9 and 13 into equal areas (i.e., the upper part is comprised of both the top section and the bottom section).

Ostergaard is silent as to whether the plurality of openings 15, 16 and 17 located on each of the upper parts of baffles 8, 9 and 13 may be distributed such that a ratio of the total area of openings to the area of the section of the baffle is greater in the bottom section of each baffle than in the top section of each baffle, or whether a total area of openings in the bottom section is greater than in the top section of said baffle. Ostergaard, however, discloses that the plurality of openings may be disposed “*at or adjacent to the outlets from the constricted passages [i.e., throat 10 or annular space 14; FIG. 1],*” (column 4, lines 59-74), and the placement of openings is selected such that,



“Contact of the dense catalyst stream [of a density of about 25 pounds per cubic foot] with the stripping medium serves to displace a still greater portion of the entrained hydrocarbons and also serves to reduce the density of the catalyst suspension to approximately 15 pounds per cubic foot.” (column 6, lines 20-51).

Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the ratio of opening area per section area, and the area of openings per section, such that the ratio and the area of openings in the bottom section of each baffle was greater than in the top section of each baffle in the apparatus of Ostergaard, on the basis of suitability for the intended use, because the opening area per bottom section relative to the top section would have been considered a result effective variable by one having ordinary skill in the art. Accordingly, one having ordinary skill in the art would have routinely optimized the area of openings in the bottom section relative to the top section to obtain the desired change in catalyst stream density at each of the baffle stages, to strip a desired portion of entrained hydrocarbon from the catalyst at each stage, *In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980), and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 3, Ostergaard discloses each stripping baffle 8, 9, 13 having a transverse projection equal to at least one-third of the minimum transverse cross-section of the stripping vessel 2 at that baffle location (see FIG. 1).

Regarding claim 5, Ostergaard is silent as to the distance between adjacent openings 15, 16 or 17 being smaller in the bottom section of the baffle 8, 9 or 13 than in the top section of the baffle. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the openings of the baffles as such in the apparatus of

Art Unit: 1764

Ostergaard, on the basis of suitability for the intended use, because the shifting of location of parts merely involves ordinary skill in the art, and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claims 6 and 7, Ostergaard discloses the openings 15, 16, 17 in each of said baffles 8, 9, 13 are distributed in rows substantially parallel to one of said top and bottom edges (i.e., "In the upper part of the funnel shaped baffles 8 and 9 and in the upper part of the conical baffle 13 are rows of perforations or openings 15, 16 and 17, respectively, which are preferably horizontal or substantially horizontal," column 5, lines 42-47). As seen in FIG. 1, it appears that a distance between adjacent rows of openings 15, 16 and 17 and a distance between openings 15, 16 and 17 in one of said adjacent rows of openings is roughly equal, although Ostergaard does not specifically disclose such distances. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the rows of openings in the baffles as such in the apparatus of Ostergaard, on the basis of suitability for the intended use, because the shifting of location of parts merely involves ordinary skill in the art, and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

Art Unit: 1764

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-27 of U.S. Patent No. 6,740,227. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Regarding current claims 1, 4 and 8, U.S. '227 substantially claims the instantly recited apparatus, including a plurality of opening distributed over the sloped surface of each stripping baffle, wherein a lower portion of the sloped surface has a greater concentration of openings than an upper portion of the sloped surface. See U.S. '227 claims 19 and 25. Hence, a ratio of the total area of openings to the area of the section of the baffle is inherently greater in the bottom section of the baffle than the top section of the baffle, and a total area of openings in the bottom section is inherently greater than in the top section of the baffle, as defined by an imaginary line that bifurcates the baffle into equal area for the top section and the bottom section.

Regarding current claim 2, see U.S. '227 claim 20.

Regarding current claim 3, see U.S. '227 claim 19 (specifically, column 18, lines 25-29).

Regarding current claim 5, although U.S. '227 is silent as to claiming that "an average

Art Unit: 1764

distance between adjacent openings is smaller in the bottom section of the baffle than in the top section of the baffle,” it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the openings of the baffles as such in the apparatus of U.S. ‘227, on the basis of suitability for the intended use, because the shifting of location of parts to obtain a configuration that enables the lower portion of the sloped surface of each baffle to have a greater concentration of openings than the upper portion of the sloped surface, as recited in U.S. ‘227 claim 25, would have been obvious to one of ordinary skill in the art, and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding current claims 6 and 7, although U.S. ‘227 is silent as to claiming that the “openings in the bottom section and top section of said baffle are distributed in rows substantially parallel to one of said top and bottom edges,” or “a distance between adjacent rows of openings and a distance between openings in one of said adjacent rows of openings is equal,” it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the openings of the baffles as such in the apparatus of U.S. ‘227, on the basis of suitability for the intended use, because the shifting of location of parts to obtain a configuration that enables the plurality of openings to be distributed over the entire sloped surface of each stripping baffle while providing at least one opening for each square foot of the sloped surface, as recited in U.S. ‘227 claim 19, would have been obvious to one of ordinary skill in the art, and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


Krebs, Centinkaya et al. and Haddad et al. are provided to illustrate the state of the art.

\* \* \*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung  
March 24, 2005 

  
**HIEN TRAN**  
**PRIMARY EXAMINER**